

Mean What You Say: Defining and Integrating Personalized, Blended and Competency Education

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Introduction

The purpose of the personalized learning framework is to open student pathways and encourage student voice and choice in their education. Personalized learning is enabled by instructional environments that are competency-based. By tapping into modalities of blended and online learning using advanced technologies, personalized learning is enhanced by transparent data and abundant content resources flowing from redesigned instructional models to address the standards. By doing this, new school models can unleash the potential of each and every student in ways never before possible.

THIS PAPER IS INTENDED TO PROVIDE A SCAN OF THE LITERATURE AND EXPAND THE KNOWLEDGE BASE for the field to integrate the core ideas of personalized learning, blended learning, competency education, and standards. The goal of the paper is to explain the nuances of key terms used across the field of K-12 education related to personalized, blended and competency education, and how the ideas integrate in order to create new learning models. In sum, the goal of this paper is to make sense of the terms and how they fit together.

INACOL experts receive feedback from thousands of practitioners each year as new learning models are planned, piloted and implemented around the globe using different models of blended and online learning. In our effort to develop this paper, we conducted literature reviews of the definitions, surveyed the field on definitions and concepts, hosted webinars, and conducted focus groups and interviews to inform our work.

We believe that there is a critical need to describe these terms of personalized learning, blended learning and competency education in the context of the dramatic shifts around next generation learning models and new school designs.

The first section of this paper describes personalized learning and its characteristics. The second section describes blended learning and how it supports personalization, and how the two concepts are different. The third section describes how competency education is the foundation for the idea of systemic transformation to new learning models that are student-centered (Jobs for the Future, 2012).¹ The fourth section describes the critical role standards play in structurally supporting personalized, blended and competency-based learning that is both rigorous and world-class.

1 From *Students at the Center*: critical and distinct elements of student-centered approaches to learning challenge the current schooling and education paradigm:

- Embracing the adolescent's experience and learning theory as the starting point of education;
- Harnessing the full range of learning experiences at all times of the day, week, and year;
- Expanding and reshaping the role of the educator; and
- Determining progression based upon mastery.



Designing for Personalized Learning

Working Definition of Personalized Learning: Personalized learning is tailoring learning for each student's strengths, needs and interests — including enabling student voice and choice in what, how, when and where they learn — to provide flexibility and supports to ensure mastery of the highest standards possible.

THE MAJORITY OF THE CURRENT TRADITIONAL EDUCATION LANDSCAPE HAS A ONE-SIZE-FITS-ALL FEEL, where each student's education is not differentiated and all are expected to progress at the same time through the same curriculum. Personalization theory pushes educators to think outside the box by emphasizing the need for learners to be involved in designing their own learning process (Campbell & Robinson, 2007). In a personalized learning environment, learners have agency to set their own goals for learning, create a reflective process during their journey to attain those goals, and be flexible enough to take their learning outside the confines of the traditional classroom.

According to Miliband (2006), there are five phases of personalized learning:

1. *Assessment phase* – Teacher and students work together in a formative manner to identify strengths and weaknesses.
2. *Teaching and learning phase* – Teachers and students select learning strategies.
3. *Curriculum choice phase* – Student chooses the curriculum, creating a pathway for student choice.
4. *Radical departure from typical education models phase* – Built on student progress, this phase provides teachers the flexibility to choose their own teaching strategies.
5. *Education beyond the classroom phase* – Using social and community connections, students personalize their surroundings (with the help of the teacher, when needed) to create their ideal learning environment.

Many educators surveyed by INACOL understand how personalization can transform learning. These educators shared their poignant comments below:

- Personalization is an understanding that tapping into unique interests, individual styles, and specific needs can make work and learning meaningful and authentic.
- Personalization is asking each student, "What is best for you?"
- Personalization is about relationships, knowing each individual student based on their academic and personal interests.

- Personalization is students accessing a curriculum that meets their individual needs, reflects their zone of proximal development, and gives them the opportunity to access resources to progress at their personal rate of learning.
- Personalization is engaging students with personal learner plans, where contributions from students, parents, support staff, and teachers provide a path for ubiquitous learning to address students' individual needs, interests, and learning styles.
- Personalization is every student learning at his/her own pace using the tools that help them learn and augment their strengths.
- Personalization is meeting the learner where they are, determining where they need to be, and finding and scaffolding the right zone of proximal development to get them there.

As can be seen by some of the responses from the field above, differentiation is part of personalizing learning, and it is essential in education. Many practitioners look to meet each student's needs via his or her zone of proximal development. Research supporting personalization of learning includes Bloom's classic 2 sigma learning studies, in which students who were tutored in a 1-to-1 ratio achieved two standard deviations above students who learned in a traditional school setting of a 30-to-1, student-to-teacher ratio (Bloom, 1984). The implications of the 2 sigma learning studies push educators to think about the shifting role of the traditional teacher from provider of knowledge to a group of students to a tutor of each and every student, offering personalized learning to each learner based on his/her mastery learning trajectory.

Without personalization there is a gap between the individual student, his or her learning, and the support they need to succeed in a way that makes sense to his/her interests. Personalization allows students to take ownership of their learning, giving them the opportunity to feel valued, motivated, in control. It also changes the dynamic between the teacher and the student.

What does personalization look like? Personalized learning...

- Is an education full of variety and choice;
- Always involves a relationship between the teacher and the student, as well as a strong sense of community within the class as a whole;
- Is a space where students have access to a wide range of subjects that meet their pathway needs and interests;
- Is, within each subject, a students' right to access learning experiences that enable them to progress according to their level of ability;
- Is an opportunity for students to make decisions about the direction of their learning; for example, they can pick the topic they are going to research for an assignment, the book for their book chats, and how they want to write the procedures for their lab work;
- Is a dynamic learning opportunity providing students with content that addresses their personal learning needs based on their interests, parental input, and teacher observation as well as assessment data, which is the most important element;
- Is students managing their own work calendars and daily schedules to stay on track, so they are free to move through courses at their own pace and have individualized learning paths and intervention plans;
- Is students using personal learning devices, such as mobile devices to individualize their learning and improve communication within the school community;

- Is the school community including multiple layers of support;
- Is students interacting and collaborating with each other and with the content;
- Emphasizes teachers interacting with the content, with students and with other teachers;
- Necessitates social-emotional connections built between students and teachers as the foundation of their work together;
- Means various starting points within content, varied amounts of guided practice and independent practice as needed.

Personalization is about many ideas. It is about...

- Discovering students' prior knowledge and experience of the content they are about to learn and meeting them where they are;
- Guiding students to make healthy academic decisions;
- Developing learning communities that celebrate the individuality and contributions of each student; and
- Consolidating forms of student learning data so that they are useful for planning for personalized instruction.

To personalize learning is to encourage students to develop clear goals and expectations for achievement and support them to make good decisions in a challenging and rigorous learning environment. It's a space where teachers are allowed the time they need to work with students; design instruction that is rigorous, flexible, and adaptable; and focus on critical thinking and metacognitive practices to develop stronger, deeper, independent learning.

In "How Children Learn," which was developed by the International Academy of Education, there are 12 elements, with supporting research, that were developed to guide the design of instruction and curriculum to support children's learning (Vosniadou, 2001). These design elements, illustrated in Table 1, should be used to guide the design of personalized learning environments.

All of the elements in Table 1 are important in the process of personalization. Additionally, according to educators from the field, the following are the top ten essential components of personalization:

1. Student agency (student has voice and choice on level of standards/lesson and some control over how they learn)
2. Differentiated instruction
3. Immediate instructional interventions and supports for each student is on-demand, when needed
4. Flexible pacing
5. Individual student profiles (personalized learning plan)
6. Deeper learning and problem solving to develop meaning
7. Frequent feedback from instructors and peers
8. Standards-based, world-class knowledge and skills
9. Anywhere, any time learning can occur
10. Performance-based assessments — project-based learning, portfolios, etc.

Table 1. 12 Elements for Designing Instruction and Curriculum to Support Children’s Learning

Element	Description of Element	Element’s Supporting Research
Active involvement	Learning requires the active, constructive involvement of the learner.	Elmore, Peterson & McCarthy, 1996; Piaget, 1978; Scardamalia & Bereiter, 1991
Social participation	Learning is primarily a social activity and participation in the social life of the school is central for learning to occur.	Brown et al., 1996; Collins, Brown & Newman, 1989; Rogoff, 1990; Vygotsky, 1978
Meaningful activities	People learn best when they participate in activities that are perceived to be useful in real life and are culturally relevant.	Brown, Collins & Duguid, 1989; Heath, 1983
Relating new information to prior knowledge	New knowledge is constructed on the basis of what is already understood and believed.	Bransford, 1979; Bransford, Brown & Cocking, 1999
Being strategic	People learn by employing effective and flexible strategies that help them to understand, reason, memorize, and solve problems.	Mayer, 1987; Palincsar & Brown, 1984; White & Frederickson, 1998
Engaging in self-regulation and being reflective	Learners must know how to plan and monitor their learning, how to set their own learning goals and how to correct errors.	Brown, 1975; Boekaerts, Pintrich & Zeidner, 2000; Marton & Booth, 1997
Restructuring prior knowledge	Sometimes prior knowledge can stand in the way of learning something new. Students must learn how to solve internal inconsistencies and restructure existing conceptions when necessary.	Carretero & Voss, 1994; Driver, Guesne & Tiberghien, 1985; Schnotz, Vosniadou & Carretero, 1999; Vosniadou & Brewer, 1992
Aiming towards understanding rather than memorization	Learning is better when material is organized around general principles and explanations, rather than when it is based on the memorization of isolated facts and procedures.	Halpern, 1992; Resnick & Klopfer, 1989; Perkins, 1992
Helping students learn to transfer	Learning becomes more meaningful when the lessons are applied to real-life situations.	Bruer, 1993; Bransford, Brown & Cocking, 1999; Bereiter, 1997
Taking time to practice	Learning is a complex activity that cannot be rushed. It requires considerable time and periods of practice to start building expertise in an area.	Bransford, 1979; Chase & Simon, 1973; Coles, 1970
Developmental and individual differences	Children learn best when their individual differences are taken into consideration.	Case, 1978; Chen et al., 1998; Gardner, 1991; Gardner, 1993
Creating motivated learners	Learning is critically influenced by learner motivation. Teachers can help students become more motivated learners by their behavior and the statements they make.	Deci & Ryan, 1985; Dweck, 1989; Lepper & Hodell, 1989; Spaulding, 1992

Scott Benson, Program Officer for the Bill & Melinda Gates Foundation, identified the following working list of essential attributes for a personalized learning model (2013):

- Learner Profiles: Captures individual skills, gaps, strengths, weaknesses, interests & aspirations of each student.
- Personal Learning Paths: Each student has learning goals & objectives. Learning experiences are diverse and matched to the individual needs of students.
- Individual Mastery: Continually assesses student progress against clearly defined standards & goals. Students advance based on demonstrated mastery.
- Flexible Learning Environment: Multiple instructional delivery approaches that continuously optimize available resources in support of student learning.

Compare these essential attributes to what most traditional one-size-fits-all classroom environments look like: learner profiles with precise knowledge and skills, students with personal learning paths versus a lecture-based learning experience; flexible learning environments with a variety of modes, resources and modalities (e.g. connectivism, as illustrated in Figure 1) versus one approach for all students at the exact same pace using a single textbook. Today, with these contrasts, the vast majority of traditional classrooms in the K-12 education system are far from realizing the promise of personalized learning. However, this is where the shift to blended learning instructional models can begin to incorporate the essential elements for personalized learning — providing a roadmap and solution as a method or *modality* for delivery — and a means to transform education to student-centric learning. Realizing this transformation requires highly personalized, blended learning environments designed and built upon competency education.

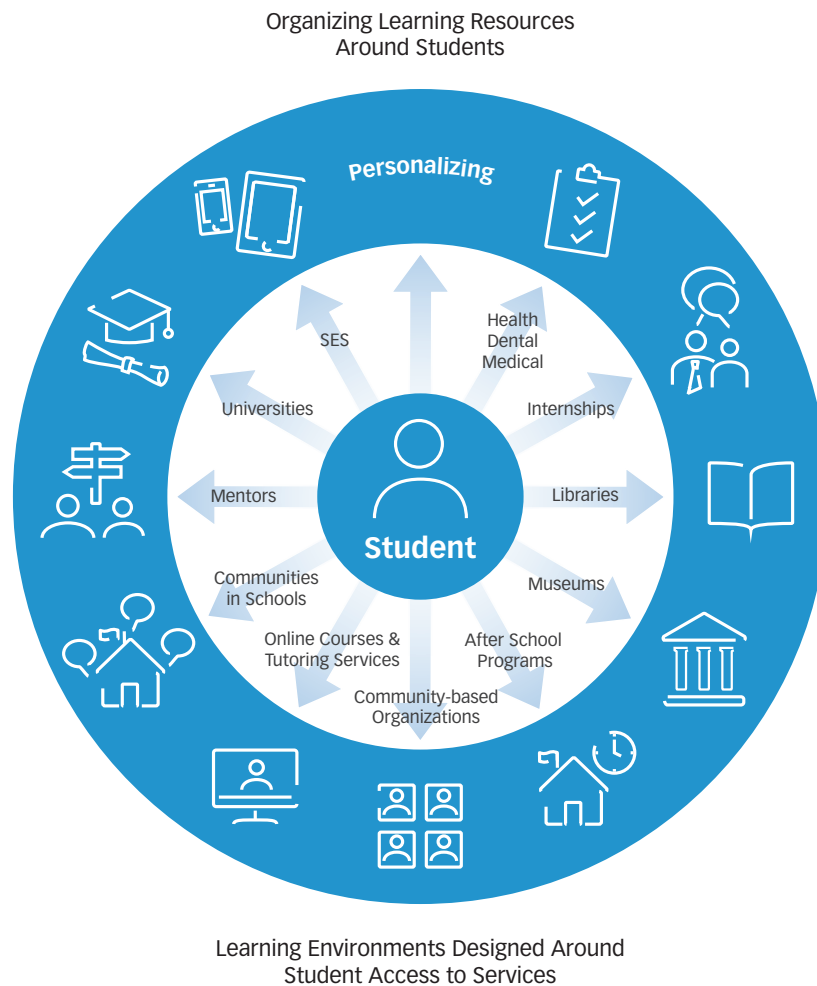


Figure 1. Educating Beyond the Classroom: Connectivism in Action

As Sir Ken Robinson said, “Education doesn’t need to be reformed—it needs to be transformed. The key is not to standardize education, but to personalize it, to build achievement on discovering the talents of each child, to put students in an environment where they want to learn and where they can naturally discover their true passions” (2009).